

# BAKKAR

## Maths 3



Play , Think & Learn  
With  
**BAKKAR**

كراسة Skills Part هدية مجانية مع الكتاب

Deposit No. 85203/ 2020



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Bakkar

Maths

First Term

Parent's Guide

# BAKKAR

## Maths 3



Contains Maths Journal  
and discover applications

Primary 3

First Term





## Data representation

### Key Vocabulary

|              |                        |
|--------------|------------------------|
| Axe          | المحور                 |
| Bar graph    | تمثيل البياني بالأعمدة |
| Centimeter   | سنتيمتر                |
| Check list   | قائمة التحقق           |
| Estimate     | تقدير                  |
| Evaluation   | التقييم                |
| Greater than | أكبر من                |
| Head         | رأس                    |
| Horizontal   | أفقي                   |
| Increasing   | الزيادة                |
| Items        | العناصر                |
| Key          | المفتاح                |
| Length       | الطول                  |
| Line         | الخط                   |
| Measure      | المقياس                |

|                            |                        |
|----------------------------|------------------------|
| Measure                    | متر                    |
| Millimeter                 | المليمتر               |
| Number line                | خط الأعداد             |
| Number pattern             | نمط الأعداد            |
| Number plots               | مخطط التمثيل بالنقاط   |
| Numerical data             | البيانات العددية       |
| Pattern                    | النمط                  |
| Pictograph - Picture graph | التمثيل البياني بالصور |
| Persistence                | المثابرة               |
| Reference marks            | العلامة المرجعية       |
| Repeating                  | التكرار                |
| Smaller than               | أصغر من                |
| Statistical signs          | علامات الإحصاء         |
| Table                      | الجدول                 |
| Visual pattern             | النمط البصري           |

### Content

Bakkar  
Self-Check

Bakkar  
Exercise  
on lessons

Exercise  
Inspired from  
Math Journal

Exercise  
Inspired from  
Discover





# Lesson

(1, 2)

# محمد عوض

## The pattern - bar graph

Activity

1

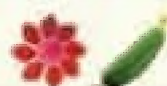
Notice the pattern :

a



Hint

Replay the pattern



b



Hint

The increasing of shapes in each pattern.

Exercise

1

Notice and complete the pattern :

a



b



c

10 , 20 , 30 , , ,

d

2 , 4 , 6 , , ,

e

5 , 10 , 15 , , ,



### Activities from Math Journal

Activity

\*

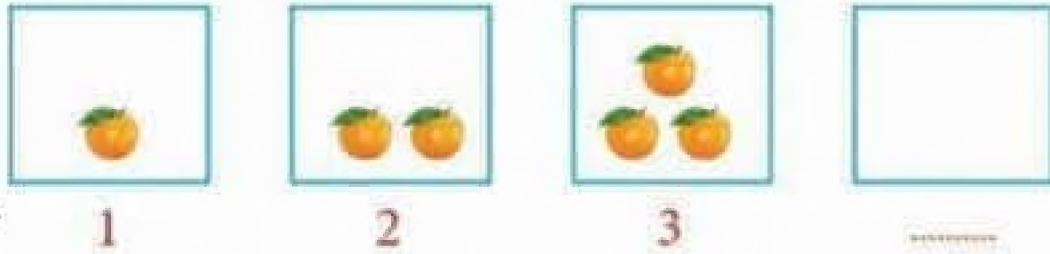
Notice the pattern then complete :







**Exercise 2** Predict the number of oranges in the last figure :



The number

1

2

3

.....

**Hint**

Add 1 orange each pattern

**Exercise 3** Predict the number of bells in the last figure :



The number

1

3

5

.....

**Hint**

Add 2 bells each figure.

**Exercise 4** Complete the fourth :

**Math Journal**



The number

4

9

16

The number

.....



**Hint**

Add Row has 2 counters more than the base row :

**Bakkar Series**



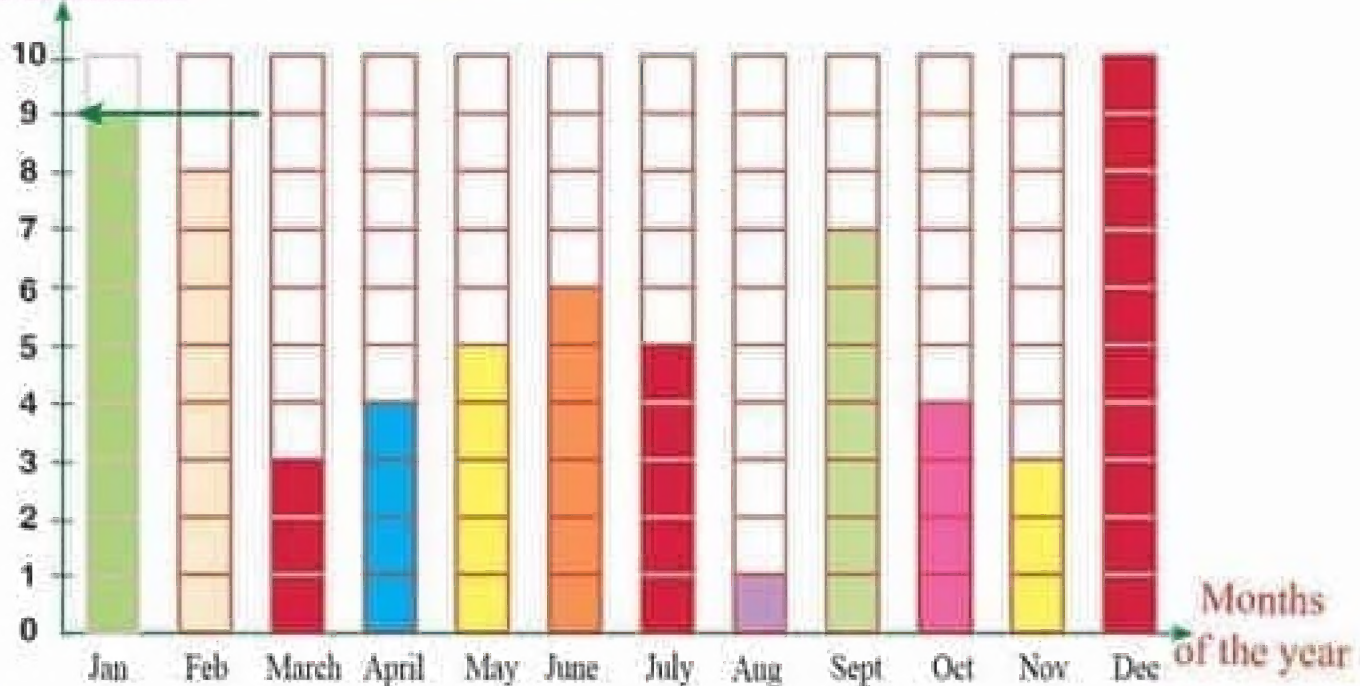
## Make a bar graph

## Activity

2

By asking some pupils about their birthdays and write the number of each month then represent it by bar graph :

Number of students



a) Number of student whose birthday in march = \_\_\_\_

b) The month which has the most number of births = \_\_\_\_

## Exercise

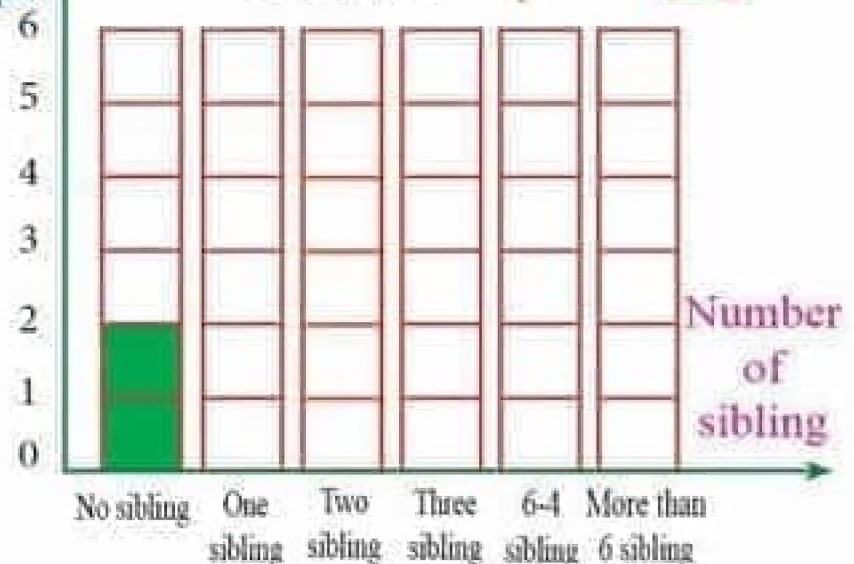
5

By asking some pupils about their siblings and write it at the table complete the bar graph :

| Number of sibling   | Number of pupils |
|---------------------|------------------|
| No sibling          | 2                |
| One sibling         | 4                |
| Two sibling         | 3                |
| Three sibling       | 5                |
| sibling 6-4         | 3                |
| More than 6 sibling | 1                |

Number of pupils

One pupil = /



Math Journal

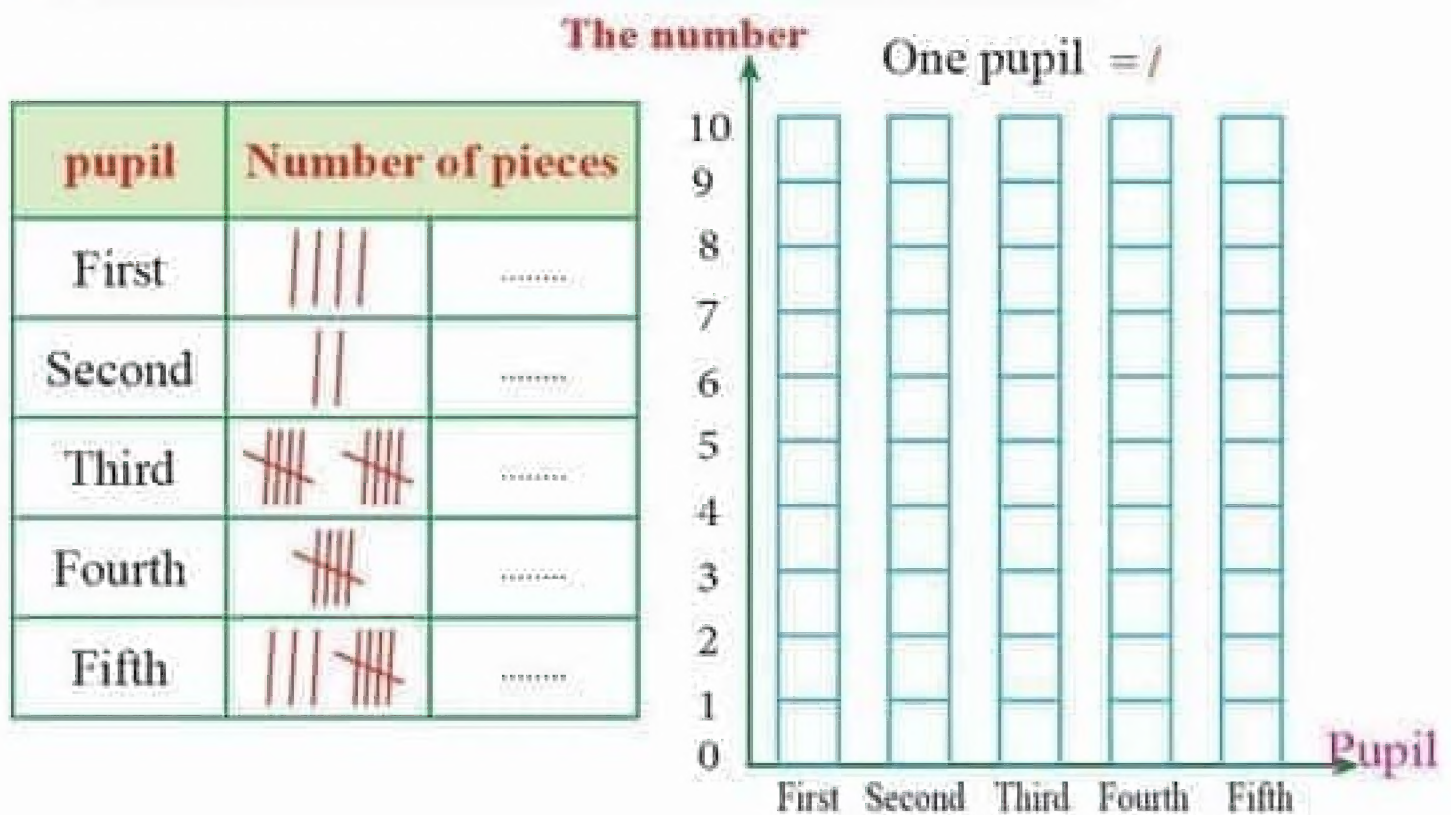


## Self - check on lesson (1, 2)

1 Notice the pattern and complete :





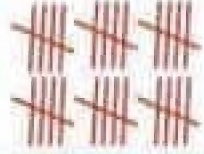

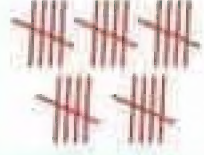
2 Complete the table and colour the bar graph :

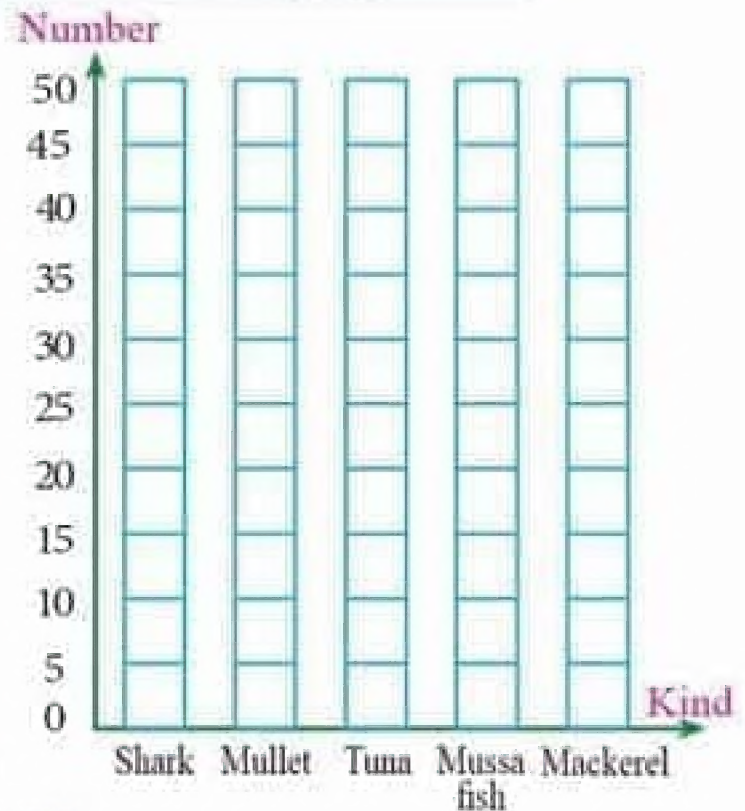




3

The following table shows the numbers of some types of fish in a restaurant, draw the bar graph :

| Kind of fish | Number of fish  |       |
|--------------|---|-------|
| Shark        |    | ..... |
| Mullet       |    | ..... |
| Tuna         |    | ..... |
| Mussa fish   |   | ..... |
| Mackerel     |  | ..... |



a




How many tuna and sharks together ? .....

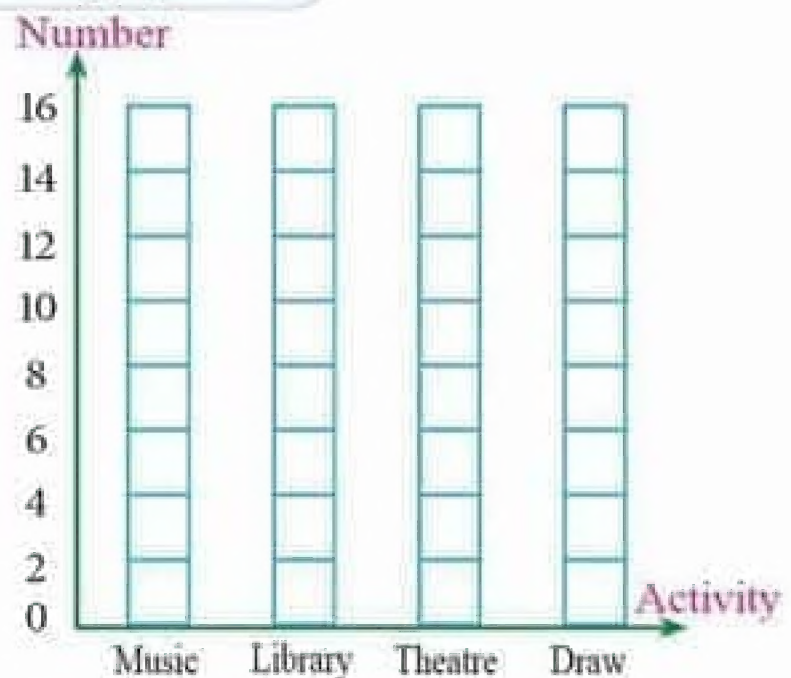
b

What is the difference between the number of Tuna and Mussa? .....

4

From the table draw the bar graph :

| Activity | Number  |       |
|----------|---|-------|
| Music    |  | ..... |
| Library  |  | ..... |
| Theatre  |  | ..... |
| Draw     |  | ..... |



- Arrange the activities in an ascending order :



# Lesson

( 3 , 4 )

## Picture graph - line plots

Activity

1

The teacher ask the pupils about there prefer sweet and from the following table , complete the picture graph :

| My favorite desserts |       |                |             |
|----------------------|-------|----------------|-------------|
| Basbousa             |       | Basbousa       | ⊖ ⊖         |
| kunafa               | #     | kunafa         | ⊖ ⊖ ⊖ ⊖ ⊖   |
| Sweet potatoes       | # #   | Sweet potatoes | ⊖ ⊖ ⊖ ⊖ ⊖ ⊖ |
| Sweet feteer         |       | Sweet feteer   |             |
| Rice pudding         | # #   | Rice pudding   |             |
| Om Ali               | # # # | Om Ali         |             |

Math Journal



Key

⊖ = 2 pupils , ⊖ = 1 pupil

Exercise

1

Complete the picture graph :

| Activity   | Number of pupils |            |       |
|------------|------------------|------------|-------|
| Sporty     |                  | Sporty     |       |
| Theatrical |                  | Theatrical | □ □   |
| Singling   | #                | Singling   |       |
| Musically  | #                | Musically  | □ □ □ |



Key

□ = 2 pupils , □ = 1 pupil

Bakkar Series

31



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# The line plots

Exercise

2

Some boxes each has number of oranges write the number on the line plots :



# Line plots :

\*\* Start by the small number from the left .



Exercise

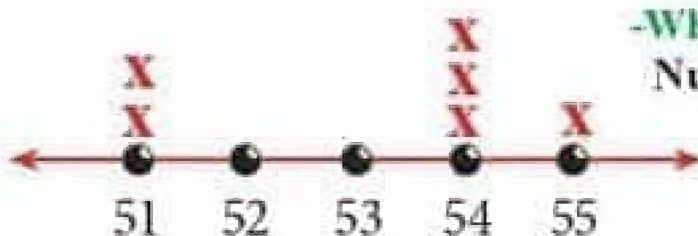
3

Some bags each has a number of beans as shown complete the line plot using X :



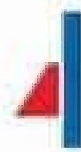
X means 1 bag

Line plot of beans



-What is the number of bags what has 53 beans ?  
Number of bags .....





## Activity

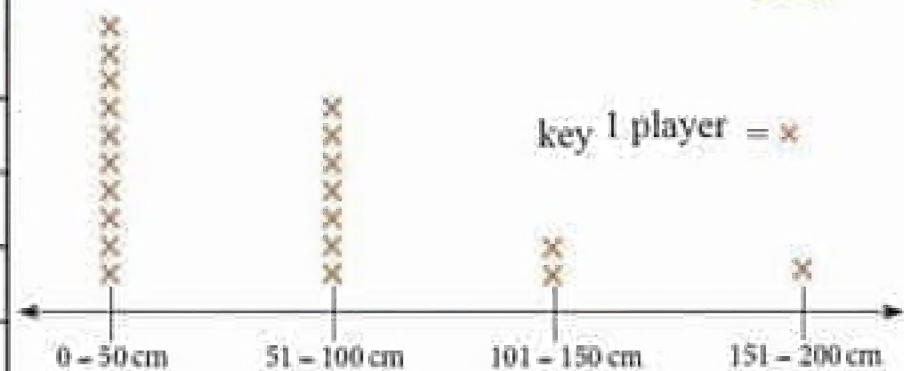
2

A number of players competed in a jumping competition, and the students recorded the height that each player reached when jumping in the following table :

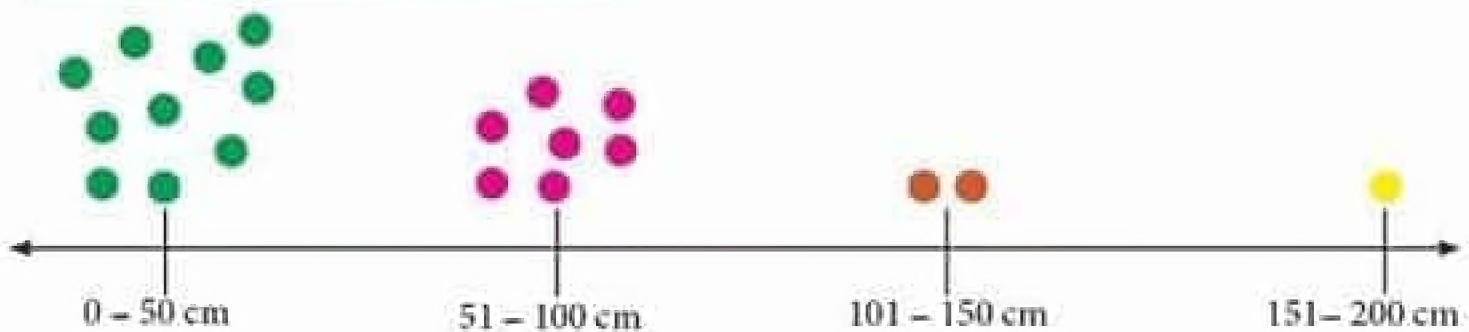
Discover  
book

Representation by ×

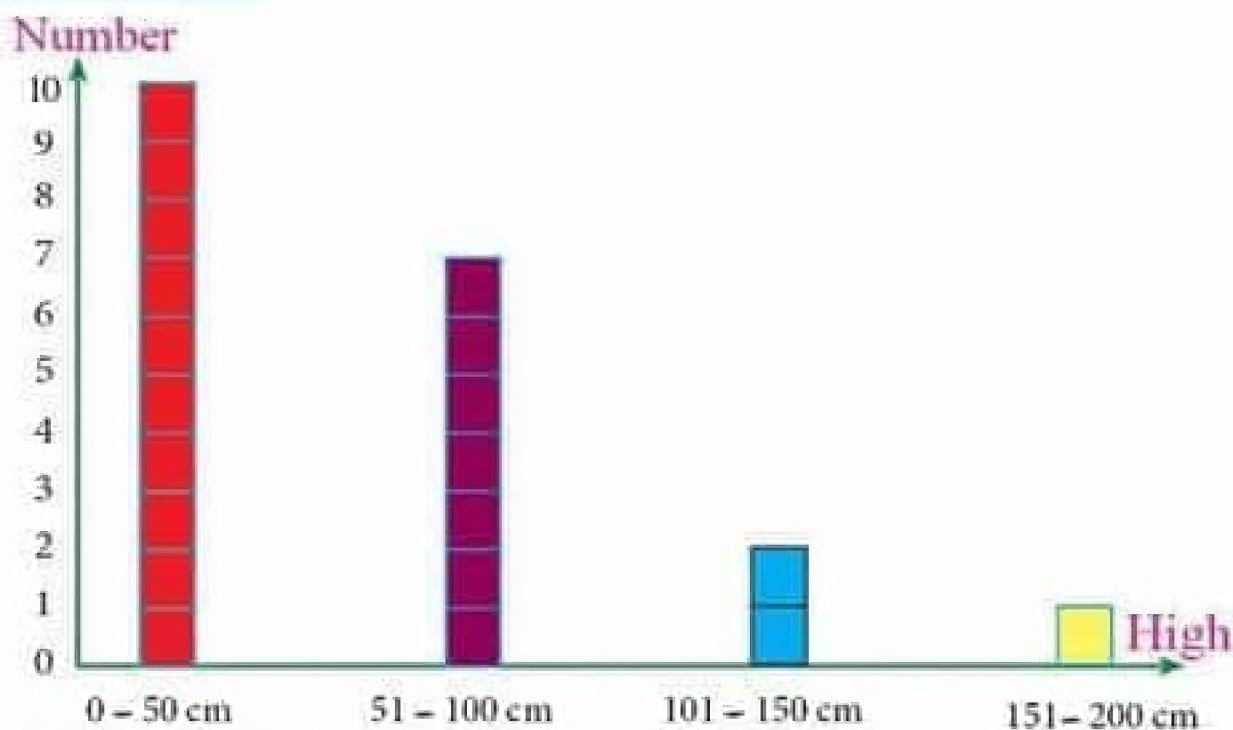
| Height of jumping | Number of players |
|-------------------|-------------------|
| 0 - 50 cm         | 10                |
| 51 - 100 cm       | 7                 |
| 101 - 150 cm      | 2                 |
| 151 - 200 cm      | 1                 |



Dot representation



Bar graph




Bakkar Series

















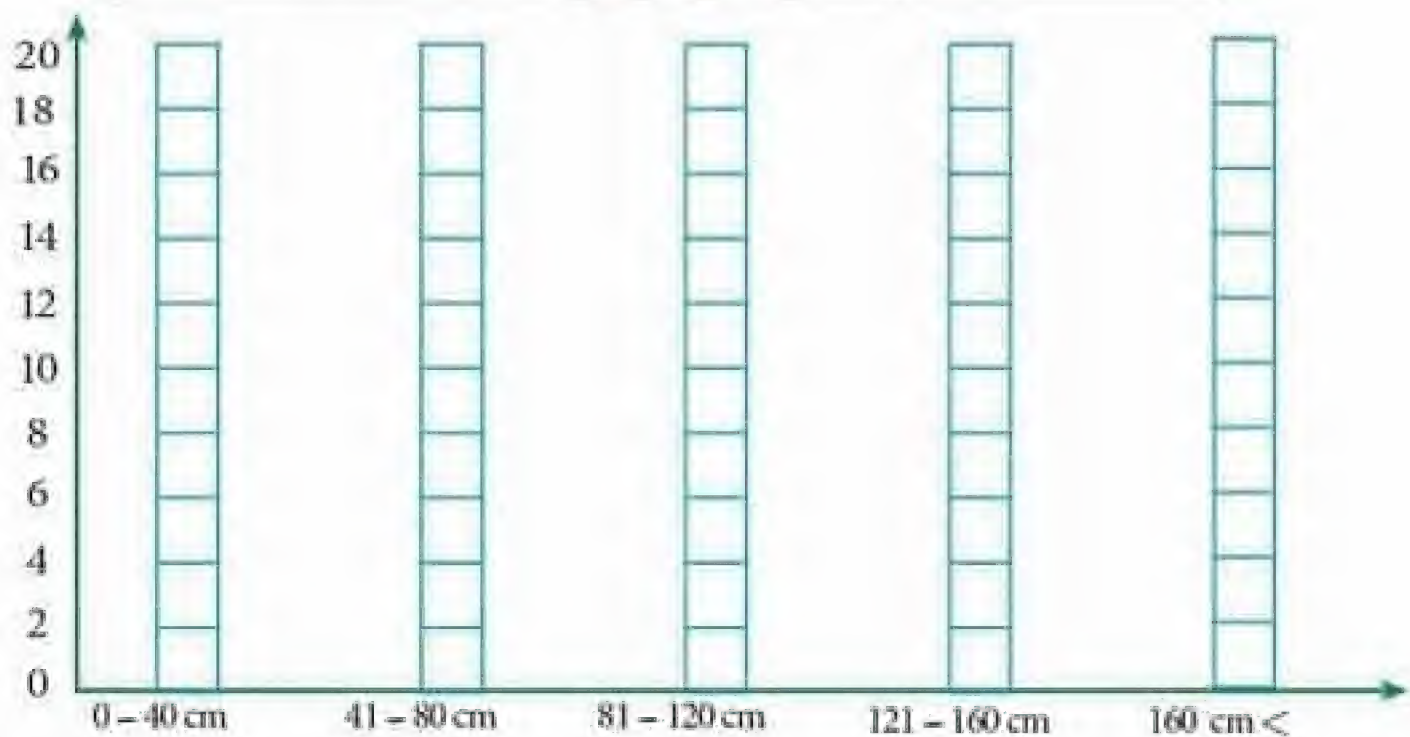


3

The answers of 52 pupils in your class recorded the distance that each of them jumped by placing the marks  in the correct row in the next chart complete the data representation graph and answer the following :

Discover  
book

| Jumping      | Number of pupils  |       |
|--------------|---|-------|
| 0 - 40 cm    |     | ..... |
| 41 - 80 cm   |     | ..... |
| 81 - 120 cm  |    | ..... |
| 121 - 160 cm |     | ..... |
| 160 <        |      | ..... |



- a) How far has the most number of pupils scored ? .....
- b) How far did the least pupils scored ? .....
- c) How many students jumped 121 or more ? .....



# Lesson

( 5 , 6 , 7 )

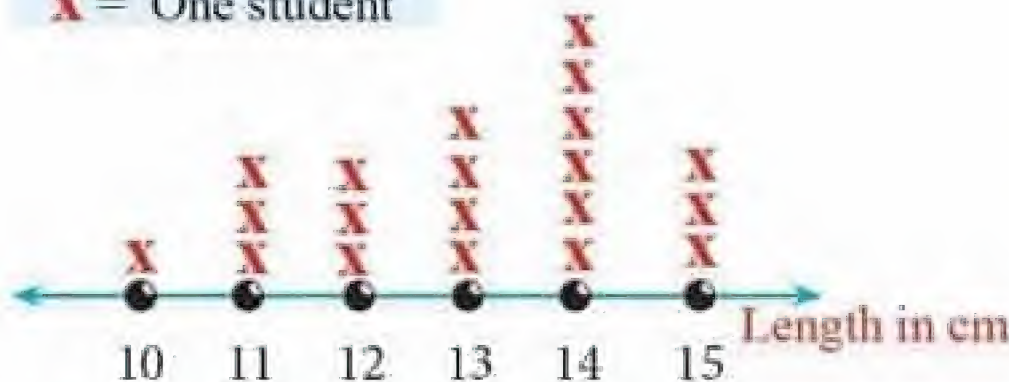
Measuring Length using **cm** , **m**  
- Estimate the lengths .

Activity

1

Length of the students hand from wrist to middle finger :

**X** = One student



From the line plots complete :

- Number of Student who's hand length 11 cm = .....
- Number of Student who's hand length 14 cm = .....
- Number of Student who's hand length 15 cm = .....
- The Number of students who's hand length less than 13 cm =  $3+3+1 = \dots\dots\dots$
- The Number of students who's hand length between 13 and 15 cm = .....

Exercise

1

Use ruler to find the length of the following :

-  .....
-  .....
-  .....
-  .....
-  .....

The order of the lengths from shortest to longest :

....., ....., ....., ....., .....







## Estimate the length



**Centimetre ( cm ) :** Used to measure the short lengths .

**Example :** the length of a pen 16 cm .



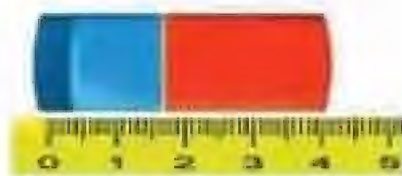
**Metre ( m ) :**

**Example :** the width of the road about 20 m the height of the building about 30 m .

### Activity

2

In each of the following read the measure on the ruler [ estimated length ] then write the actual length :



The actual = 4 cm



The estimate length about = 3 cm



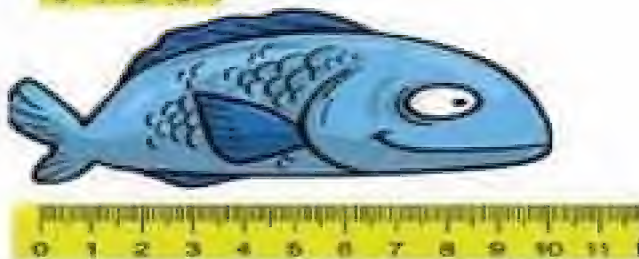
a



the estimate ..... cm

the actually ..... cm

b



the estimate ..... cm

the actually ..... cm

### Exercise

2

Choose the estimated length :

a

The width of the road is ..... m

( 1 , 6 , 600 )

b

The length of Lamppost is ..... m

( 5 , 50 , 500 )

c

The length of my father car is ..... m

( 4 , 9 , 15 )

d

The length of piece cloth for my mother is ..... m

( 3 , 40 , 35 )








## Exercise

3

Choose the suitable measurement unit :

| Image  | Meters ( m ) or Centimeters ( cm ) |
|--|------------------------------------|
|   | .....                              |
|   | .....                              |
|  | .....                              |

## Exercise

4

Complete as in (a) :

- (a)  $4 \text{ m} = 400 \text{ cm}$  .
- (b)  $9 \text{ m} = \dots\dots\dots \text{ cm}$  .
- (c)  $1 \text{ m} = \dots\dots\dots \text{ cm}$  .
- (d)  $3 \text{ m} = \dots\dots\dots \text{ cm}$  .
- (e) Half of meter =  $\dots\dots\dots \text{ cm}$  .

1 meter = 100 cm



## Exercise

5

Complete as in the example :

**Example :**  $300 \text{ cm} = 3 \text{ m}$ 

- (a)  $500 \text{ cm} = \dots\dots\dots \text{ m}$       (b)  $600 \text{ cm} = \dots\dots\dots \text{ m}$
- (c)  $700 \text{ cm} = \dots\dots\dots \text{ m}$       (d)  $400 \text{ cm} = \dots\dots\dots \text{ m}$
- (e)  $100 \text{ cm} = \dots\dots\dots \text{ m}$       (f)  $900 \text{ cm} = \dots\dots\dots \text{ m}$





### Activity

3

Arrange the following in an ascending order :

- a) 5 m, 3 m, 7 m, 2 m.

**Solution** The order : 2 m , 3 m , 5 m , 7 m

- b** 20 cm, 35 cm, 40 cm, 15 cm.

**Solution** The order : 15 cm , 20 cm , 35 cm , 40 cm

- c. 3 m, 200 cm, 5 m, 700 cm.

**Solution**  $3 \text{ m} = 300 \text{ cm}$  ,  $5 \text{ m} = 500 \text{ cm}$

The order : 200 cm , 3 m , 5 m , 700 cm .

## Activity

4

**Answer the following :**

- a** If Iyad is (1 m and half meter), What is his tall in centimetre ?

**Solution:** Iyad tall =  $100 + 50 = 150$  cm.

- b** Ahmed is 186 cm high , Mostafa is 181 cm high .

Find the difference between there high of them?

**Solution :** Ahmed height = 186 cm , Mostafa height = 181 cm

The Difference :  $186 - 181 = 5$  cm

### Exercise

6

Answer the following :

Two pieces of cloth with 130 cm , 250 cm length Find :

- a** There sum                      **b** There difference

**Solution:**  the sum = ..... + ..... = ..... cm.

**b** the difference = ..... - ..... = ..... cm.



## Self - check on lesson ( 5 , 6 , 7 )

1 Complete :

a  $5 \text{ m} = \dots\dots\dots \text{ cm}$

b  $7 \text{ m} = \dots\dots\dots \text{ cm}$

c  $3 \text{ m} = \dots\dots\dots \text{ cm}$

d  $6 \text{ m} = \dots\dots\dots \text{ cm}$

e  $2 \text{ m} = \dots\dots\dots \text{ cm}$

f  $8 \text{ m} = \dots\dots\dots \text{ cm}$

2 Complete :

a  $600 \text{ cm} = \dots\dots\dots \text{ m}$

b  $800 \text{ cm} = \dots\dots\dots \text{ m}$

c  $400 \text{ cm} = \dots\dots\dots \text{ m}$

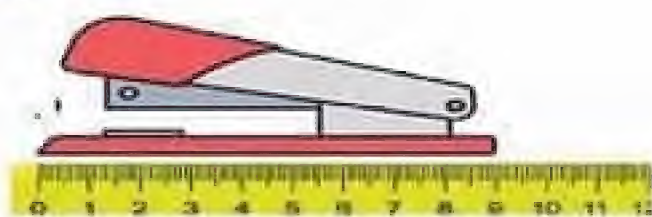
d  $300 \text{ cm} = \dots\dots\dots \text{ m}$

e  $500 \text{ cm} = \dots\dots\dots \text{ m}$

f  $900 \text{ cm} = \dots\dots\dots \text{ m}$

3 Use the ruler to estimate the lengths then write the exact length :

a



The estimation  $\dots\dots\dots \text{ cm}$

The exact  $\dots\dots\dots \text{ cm}$

b



The estimation  $\dots\dots\dots \text{ cm}$

The exact  $\dots\dots\dots \text{ cm}$

4 Arrange from the longest to the shortest :

[ 3 m , 200 cm , 5 m , 700 cm ]

The order :  $\dots\dots\dots$  ,  $\dots\dots\dots$  ,  $\dots\dots\dots$  ,  $\dots\dots\dots$





**5** Compare using [  $<$ ,  $>$ ,  $=$  ] :

a) 300 cm ..... 2 m

b) 50 m ..... 50 cm

c) 100 cm ..... 300 cm

**6** Answer the following :

a) A car with ( 3 m and 20 cm length ). How long the width in cm ?

Solution : 3 m = ..... cm

The length = ..... + ..... = 320 cm .




b) The width of the school door is ( 200 cm ).

How long the width in meter ?

Solution : The width = ..... m

**7** Write the suitable measurement unit :

**Math  
Journal**

| Image   | Meter ( m ) or centimetre ( cm ) |
|---|----------------------------------|
|  | .....                            |
|  | .....                            |
|  | .....                            |







# Lesson











( 8 , 9 , 10 )

## Millimetre

Exercise

1

Measure the pieces of string and record their length the complete the line plot :

|   | String   | Length in cm |
|---|--|--------------|
| a |    | ..... cm     |
| b |     | ..... cm     |
| c |    | ..... cm     |
| d |  | ..... cm     |
| e |  | ..... cm     |
| f |  | ..... cm     |
| g |   | ..... cm     |
| h |   | ..... cm     |
| i |  | ..... cm     |
| j |  | ..... cm     |



The length in cm





# Millimeter



**Millimetre ( mm )** Used to **measure** the very short lengths .


**Example :** the thickness of nail is 3 mm .

$$1 \text{ cm} = 10 \text{ mm} \quad \text{or} \quad 1 \text{ cm} = 10 \text{ mm}$$

$$2 \text{ cm} = 20 \text{ mm} \quad , \quad 3 \text{ cm} = 30 \text{ mm}$$




## Exercise 2

Choose the suitable measurement unit :

- a The thickness of a nail  **measure with** ..... ( mm - cm - m )
- b The length of the book  **measure with** ..... ( mm - cm - m )
- c The length of the ant  **measure with** ..... ( mm - cm - m )
- d Thickness of the power cord **measure with** ..... ( mm - cm - m )
- e The length of my grandfather's stick **measure with** ..... ( mm - cm - m )

## Exercise 3

Choose the correct answer :

- a My father high ( 2 m - 2 mm - 2 cm )
- b The length of  ( 5 mm - 5 cm - 5 m )
- c The length of  ( 30 cm - 30 mm - 30 m )
- d The thickness of the book  ( 10 m - 10 mm - 10 cm )
- e The height of my home ( 21 mm - 21 m - 21 cm )





## Activity

1

The line plots show the length of the foot in cm to some pupils and their number :



From the figure complete :

- The number of pupils with foot 29 cm = .....
- The number of pupils with foot 30 cm = .....
- The number of pupils with foot 27 cm = .....
- The number of pupils with foot less than 29 cm = ..... + ..... = .....
- The number of pupils whose foot between 30 cm and 32 cm is  
= ..... + ..... + ..... = .....

## Exercise

4

Complete the following :

- $100 \text{ cm} + 100 \text{ cm} = \dots\dots\dots \text{ cm} = \dots\dots\dots \text{ m}$
- $150 \text{ cm} + 250 \text{ cm} = \dots\dots\dots \text{ cm} = \dots\dots\dots \text{ m}$
- $20 \text{ mm} + 10 \text{ mm} = \dots\dots\dots \text{ mm} = \dots\dots\dots \text{ cm}$
- $30 \text{ mm} + 30 \text{ mm} = \dots\dots\dots \text{ mm} = \dots\dots\dots \text{ cm}$

Solution

- $100 \text{ cm} + 100 \text{ cm} = 200 \text{ cm} = 2 \text{ m}$
- $150 \text{ cm} + 250 \text{ cm} = 400 \text{ cm} = 4 \text{ m}$
- $20 \text{ mm} + 10 \text{ mm} = 30 \text{ mm} = 3 \text{ cm}$
- $30 \text{ mm} + 30 \text{ mm} = 60 \text{ mm} = 6 \text{ cm}$





## Exercise 5 Choose the correct answer :

- (a) 9 m = ..... cm. ( 9 , 90 , 900 )
- (b) 6 cm = ..... mm. ( 6 , 60 , 600 )
- (c) 30 mm = ..... cm. ( 3 , 30 , 300 )
- (d) 200 cm = ..... m. ( 2 , 20 , 200 )
- (e) 20 mm = ..... cm. ( 2 , 20 , 200 )

## Exercise 6 Put ( < , > , = ) :

- (a) 600 cm  5 m .
- (b) 40 mm  4 cm .
- (c) 750 cm  8 m .
- (d) 5 cm  60 mm .
- (e) 9 m  900 cm .



## Exercise 7 Arrange the following :

- (a) 14 mm , 17 m , 8 mm , 29 mm .

Ascendingly : ..... , ..... , ..... , ..... .

- (b) 2 cm , 10 mm , 5 cm , 70 mm .

Descendingly : ..... , ..... , ..... , ..... .



## Self - check on lesson ( 8 , 9 , 10 )

1 Choose the suitable measurement unit :

- a The length of pencils **measure with** ..... ( mm - cm - m )
- b The length of bottle **measure with** ..... ( mm - cm - m )
- c The length of piece of cloth can be ..... ( 4 cm - 4 mm - 4 m )

2 Complete :

- a  $5\text{ m} + \dots\dots\dots\text{cm} = 7\text{ m}$
- b  $200\text{ cm} + \dots\dots\dots\text{m} = 5\text{ m}$
- c  $80\text{ cm} - \dots\dots\dots\text{cm} = 50\text{ cm}$
- d  $5\text{ cm} + \dots\dots\dots\text{mm} = 7\text{ cm}$
- e  $30\text{ mm} + \dots\dots\dots\text{mm} = 60\text{ mm}$
- f  $50\text{ mm} - \dots\dots\dots\text{cm} = 2\text{ cm}$
- g  $6\text{ m} - \dots\dots\dots\text{cm} = 500\text{ cm}$

**Remember**  
 The metre = 100 cm  
 The centimetre = 10 mm

3 Put ( < , > , = ) :

- |   |       |                      |        |
|---|-------|----------------------|--------|
| a | 5 cm  | <input type="text"/> | 50 mm  |
| b | 50 cm | <input type="text"/> | 1 m    |
| c | 10 mm | <input type="text"/> | 10 cm  |
| d | 10 m  | <input type="text"/> | 10 cm  |
| e | 9 cm  | <input type="text"/> | 9 mm . |





## 4 Complete :

- (a)  $200 \text{ cm} - 100 \text{ cm} = \dots\dots\dots \text{ cm} = \dots\dots\dots \text{ m}$
- (b)  $5 \text{ cm} - 3 \text{ cm} = \dots\dots\dots \text{ cm} = \dots\dots\dots \text{ mm}$
- (c)  $7 \text{ m} - 3 \text{ m} = \dots\dots\dots \text{ m} = \dots\dots\dots \text{ cm}$
- (d)  $700 \text{ cm} - 500 \text{ cm} = \dots\dots\dots \text{ cm} = \dots\dots\dots \text{ m}$
- (e)  $40 \text{ mm} - 30 \text{ mm} = \dots\dots\dots \text{ mm} = \dots\dots\dots \text{ cm}$

## 5 Arrange the following in an ascending order :

- (a)  $3 \text{ m} , 5 \text{ m} , 1 \text{ m} , 2 \text{ m} . \dots\dots\dots$
- (b)  $40 \text{ cm} , 10 \text{ cm} , 50 \text{ cm} , 70 \text{ cm} . \dots\dots\dots$
- (c)  $10 \text{ mm} , 20 \text{ mm} , 80 \text{ mm} , 60 \text{ mm} . \dots\dots\dots$
- (d)  $7 \text{ m} , 100 \text{ cm} , 9 \text{ m} , 800 \text{ cm} . \dots\dots\dots$
- (e)  $17 \text{ cm} , 7 \text{ mm} , 70 \text{ cm} , 70 \text{ mm} . \dots\dots\dots$

## 6 Join :

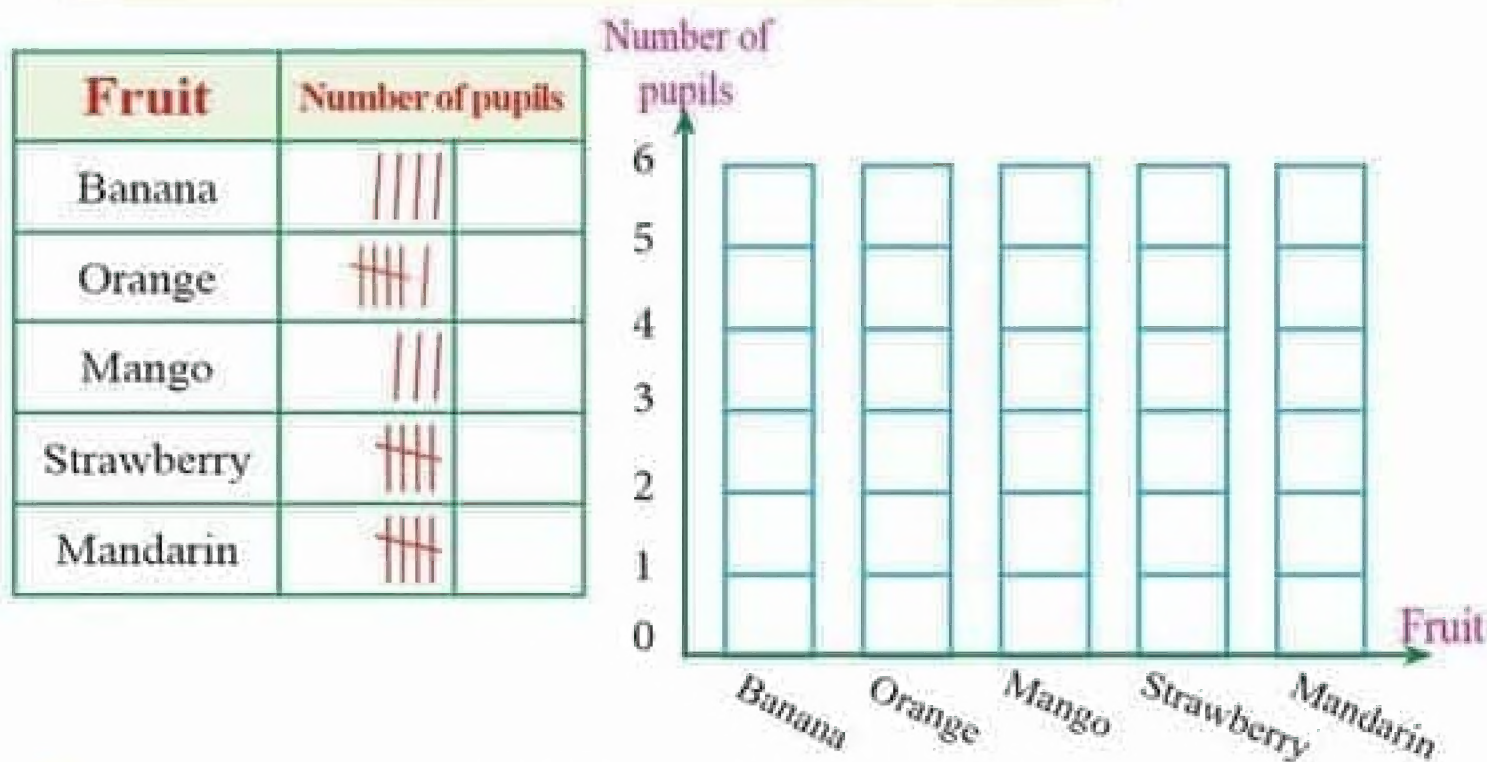
|                  |                |
|------------------|----------------|
| 1 Meter and half | 4 m            |
| 300 cm           | 100 cm         |
| 1 m              | 150 cm         |
| 400 cm           | 2 m and 100 cm |



1 Choose :

- (a) 7 m = ..... cm ( 7 , 70 , 700 )  
 (b) 5 cm = ..... mm ( 5 , 50 , 500 )  
 (c) 90 mm = ..... cm ( 9 , 90 , 900 )  
 (d) 300 cm = ..... m ( 3 , 30 , 300 )

2 Complete the table and colour the graph :



3 A car of ( 4 m and 40 cm ). What its length in cm ?

**Solution** :

The length of the car = ..... + .....  
 = ..... cm .


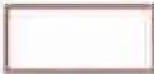




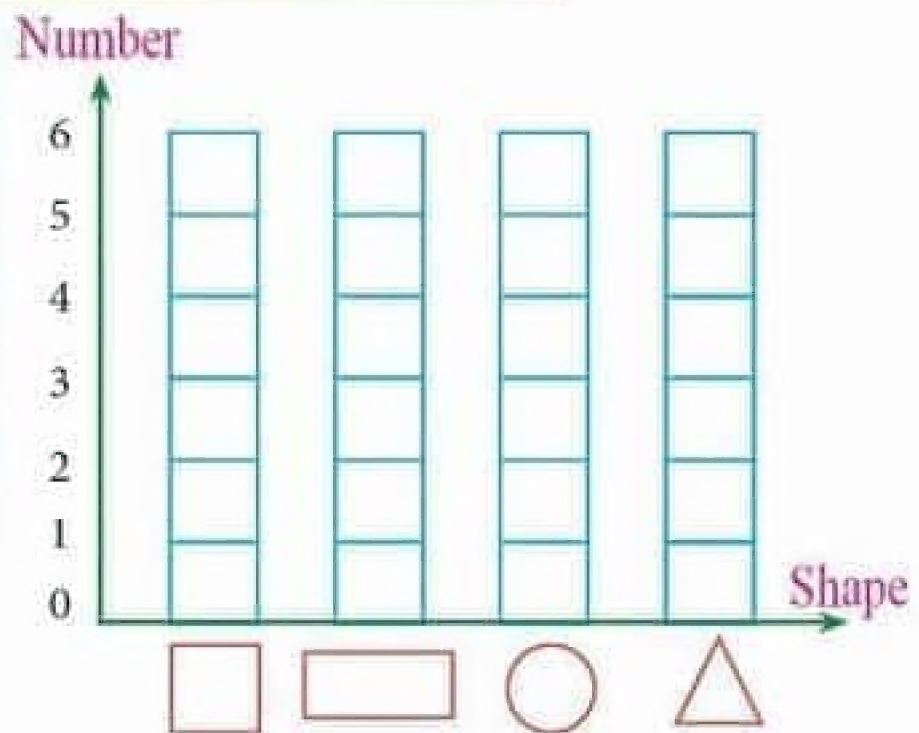


1 Complete :

- (a)  $500 \text{ cm} - 300 \text{ cm} = \dots\dots\dots \text{ cm} = \dots\dots\dots \text{ m}$
- (b)  $9 \text{ cm} - 4 \text{ cm} = \dots\dots\dots \text{ cm} = \dots\dots\dots \text{ mm}$
- (c)  $6 \text{ m} - 4 \text{ m} = \dots\dots\dots \text{ m} = \dots\dots\dots \text{ cm}$
- (d)  $800 \text{ cm} - 100 \text{ cm} = \dots\dots\dots \text{ cm} = \dots\dots\dots \text{ m}$
- (e)  $70 \text{ mm} - 3 \text{ cm} = \dots\dots\dots \text{ mm} = \dots\dots\dots \text{ cm}$

2 Complete the table and colour the graph :

| Shape   | Number |  |
|---|--------|--|
|  |        |  |
|  |        |  |
|  |        |  |
|  |        |  |



3 Choose :

6 meters and half =  $\dots\dots\dots \text{ cm}$  .

650

560

605

For more exercises follow the Bakkar Self- check page (210)

Bakkar Series